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10/668,389

09/24/2003

Felix Henry

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EXAMINER

HUNG, YUBIN

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

05/01/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/668,389

Applicant(s)

HENRY ET AL.

Examiner

Yubin Hung

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/24/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/24/03, 11/24/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because figure 7 does not include suitable descriptive legends. See 37 CFR 1.83(b).
2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

3. The disclosure is objected to because of the following informalities: the sections headings are missing. See 37 CFR 1.77(c).

Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), ANNEX IV, partly reads as follows:

First paragraph

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structure and computer programs which impart functionality when employed as a computer component. ...

Second paragraph

Both types of "descriptive material" are nonstatutory when claimed as descriptive material per se. ...

Section (a), second paragraph, beginning at line 7

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowery, 32 F.3d at 1583-84, 32 USPQ2d at 1035. ...

5. Claims 25-28 are rejected under 35 U.S.C. 101 because the claimed inventions are directed to non-statutory subject matter as follows. Claims 25-27 recite a *storage medium* storing a *program* and claim 28 recites a computer program on an *information carrier*. Since the program recited in claim 25 is not necessarily a computer program and the storage medium (recited in claim 25) and the information carrier (claim 28) are not necessarily a computer-readable medium, the inventions of claims 25-28 are not statutory subject matter.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

### **Part A**

**Note: The analyses for part A below apply to the versions of claims 3-9 as dependent from claim 1; claims 12-19 as dependent from claim 10; and claims 20-28 with respect to claims 1 or 10 as appropriate.**

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7. Claims 1, 6, 8-10, 15, 17, 18, 20, 21, 23-26 and 28 are rejected under 35

U.S.C. 103(a) as being unpatentable over Easwar (US 2004/0008897), and further in view of Cloutier et al. (US 5,847,771).

8. Regarding claim 10, and similarly claim 1 (since the device of claim 10 performs the method of claim 1), Easwar discloses an apparatus for transcoding digital data comprising

- Means of transcoding the digital data coded according to the first coding mode into the digital data coded according to the second coding mode  
[Fig. 3, refs. 320 & 325 (transcoder); Fig. 4B; P. 7, paragraph 63, lines 11-19; P. 8, paragraphs 73-75. Note that JPEG (1<sup>st</sup> coding mode) is transcoded into to Wavelet (2<sup>nd</sup> mode)]

Cloutier further discloses detecting the inactivity of resources useful for an operation (e.g., decompression) and when detected, carrying out the operation [Fig. 5, refs. 75 (detecting inactivity), 104 (resource); Fig. 9, ref. 170 (period of inactivity); Col. 19, lines 1-5].

Easwar and Cloutier are combinable because they both have aspects that are from the same field of endeavor of encoding.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Easwar with the teaching of Cloutier by detecting the inactivity of the useful resources before carrying out the desired operation. The motivation would have been for the intended operation (e.g., transcoding) to be successfully carried out while

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maintaining the system integrity (since a current task, if any, being executed in the resource will be terminated prematurely and leave the system in an uncertain state if a new task commences before the current task is complete).

Therefore it would have been obvious to combine Cloutier with Easwar to obtain the invention as specified in claim 10.

9. Regarding claim 15, and similarly claim 6, note that the first coding mode disclosed by Easwar is JPEG [Fig. 4B: ref. 410]

10. Regarding claim 17, and similarly claim 8, Easwar further discloses

- characterized in that the second coding mode is a coding according to which the data are coded by an amplitude curve and a path amongst the data  
[P. 9, paragraph 82, especially lines 12-19 (quantization) and 23-25 (the path). Note that the quantization function (lines 12-19) in the second mode (wavelet-based) constitutes an amplitude curve (since, for example, to quantizes 8-bit data uniformly into 2 bits the amplitude curve will be in the form of a step function showing values in the intervals 0-63, 64-127, 128-191 and 192-255 being quantized to values 0, 1, 2 and 3, respectively). Note further that the entropy scheme recited in lines 23-25 uses a zigzag path to scan the data, as Easwar is also disclosed in P. 7, paragraph 70, lines 3-13 of Easwar]

11. Regarding claim 18, and similarly claim 9, note that in Easwar the data coded according to a first format (JPEG) is a digital image [P. 7, paragraph 63, lines 11-13].

12. Regarding claims 20, 21 (digital data processing apparatuses) and claims 23, 24 (photographic apparatuses), note that per the analysis of claims 1 and 10 above, the

apparatus shown in Fig. 3, ref. 310 of Easwar has been modified (by Cloutier) to comprise the transcoding means according to claim 10, which realizes the method of claim 1. Note further that the apparatus is a photographic apparatus; it is also a digital processing apparatus since it processes digital images.

13. Regarding claim 25, and similarly claim 28 (a storage medium is an information carrier), Easwar further discloses a storage medium [Fig. 2B, ref. 282; P. 5, paragraph 53, lines 8-11] capable of storing a program for implementing the method of claim 1. [Note that Fig. 2B is part of the general digital camera (which Fig. 3, ref. 310 is an instance of; see P. 7, paragraph 63, lines 1-4) disclosed in Fig. 1, ref. 100.]

14. Regarding claim 26, Easwar further discloses a detachably mountable medium [Fig. 2B, ref. 284; P. 6, paragraph 53].

\*\*\*\*\*

15. Claims 3, 4, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Easwar (US 2004/0008897) and Cloutier et al. (US 5,847,771) as applied to claims 1, 6, 8-10, 15, 17, 18, 20, 21, 23-26 and 28 above and further in view of Kaneko et al. (US 6,671,454).

16. Regarding claim 12 and similarly claim 3, the combined invention of Easwar and Cloutier discloses all limitations of its parent, claim 10.



The combined invention of Easwar and Cloutier does not expressly disclose the following, but Kaneko does

- Means of selecting an order of transcoding of the digital data coded according to the first coding mode into the digital data coded according to the second coding mode  
[Fig. 17, refs. 154, 157; Col. 15, lines 20-28 & 55-61. Note that the order is based on the size]

The combined invention of Easwar and Cloutier is combinable with Kaneko because they both have aspects that are from the same field of endeavor of encoding.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combined invention of Easwar and Cloutier with the teaching of Kaneko as recited above. The motivation would have been to ensure a large free space, as Kaneko indicates in column 15, lines 60-61.

Therefore it would have been obvious to combine Kaneko with Easwar and Cloutier to obtain the invention as specified in claim 12.

17. Claim 13 (and similarly claim 4) is similarly analyzed and rejected as per claim 12 since the order disclosed by Kaneko is based on size [Col. 15, lines 60-61].

\*\*\*\*\*

18. Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Easwar (US 2004/0008897), Cloutier et al. (US 5,847,771) and Kaneko et al. (US 6,671,454) as applied to claims 3, 4, 12 and 13 above, and further in view of Ishii et al. (US 5,675,789).

19. Regarding claim 14, and similarly claim 5, the combined invention of Easwar, Cloutier and Kaneko discloses all limitations of its parent, claim 12.

In addition, Ishii discloses selecting files to compress according to access frequency [Fig. 4, ref. 102; Col. 8, lines 32-42. Note that transcoding can involve decompression first (e.g., see Easwar: Fig. 4B, ref. 411)].

The combined invention of Easwar, Cloutier and Kaneko is combinable with Ishii because they both have aspects that are from the same field of endeavor of encoding.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combined invention of Easwar, Cloutier and Kaneko with the teaching of Ishii by selecting files according to access frequency. The motivation would have been to transcode the most desired (as indicated by the access frequency) file first since the communication between the requesting server and the transcoding device can and does get lost, and when that happens, the most desired file would most likely have already

been transcoded and transmitted. [See the wireless communication link 300 between device 310 and server 370 of Easwar's Fig. 3].

Therefore it would have been obvious to combine Ishii with Easwar, Cloutier and Kaneko to obtain the inventions as specified in claim 14.

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20. Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Easwar (US 2004/0008897) and Cloutier et al. (US 5,847,771) as applied to claims 1, 6, 8-10, 15, 17, 18, 20, 21, 23-26 and 28 above, and further in view of Joshi et al. (US 6,987,890).

21. Regarding claim 16, and similarly claim 7, the combined invention of Easwar and Cloutier discloses all limitations of its parent, claim 10.

The combined invention of Easwar and Cloutier does not expressly disclose using the JPEG 2000 standard for the first coding mode. However, Joshi discloses the use of JPEG 2000 [Col. 1, lines 14-34].

The combined invention of Easwar and Cloutier is combinable with Joshi because they both have aspects that are from the same field of endeavor of encoding.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combined invention of Easwar and Cloutier with the teaching of Joshi by using the JPEG 2000 standard for the first coding mode. The motivation would have been because it provides a very flexible framework for organizing and ordering the compressed bit stream, as Joshi indicates in column 1, lines 34-39.

Therefore it would have been obvious to combine Joshi with Easwar and Cloutier to obtain the inventions as specified in claim 16.

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22. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Easwar (US 2004/0008897) and Cloutier et al. (US 5,847,771) as applied to claims 1, 6, 8-10, 15, 17, 18, 20, 21, 23-26 and 28 above, and further in view of Horie et al. (US 6,236,759).

Regarding claim 19, the combined invention of Easwar and Cloutier discloses all limitations of its parent, claim 10.

In addition, Horie discloses an image processing apparatus (with encoding and decoding units) comprising a processor, a ROM for storing programs and a RAM with

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registers [Fig. 1D, ref. 1141 (ALU, a processor), 1142 (ROM) and 1140 (RAM); Col. 9, lines 17-23].

The combined invention of Easwar and Cloutier is combinable with Horie because they both have aspects that are from the same field of endeavor of encoding.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combined invention of Easwar and Cloutier with the teaching of Horie by using the JPEG 2000 standard for the first coding mode. The motivation would have been to facilitating the operation of the apparatus, as Horie indicates in Col. 9, lines 17-18.

Therefore it would have been obvious to combine Horie with Easwar and Cloutier to obtain the inventions as specified in claim 19.

\*\*\*\*\*

23. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Easwar (US 2004/0008897) and Cloutier et al. (US 5,847,771) as applied to claims 1, 6, 8-10, 15, 17, 18, 20, 21, 23-26 and 28 above, and further in view of Holliman et al. (US 2002/0116533).

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24. Regarding claim 22, the combined invention of Easwar and Cloutier discloses all limitations of its parent, claim 20.

In addition, Holliman discloses having an apparatus with transcoding capability being part of a peer-to-peer network [Fig. 1 and P. 1, paragraph 10 (peer-to-peer); P. 3, paragraph 29 (transcoding)].

The combined invention of Easwar and Cloutier is combinable with Holliman because they both have aspects that are from the same field of endeavor of encoding.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combined invention of Easwar and Cloutier with the teaching of Holliman by having the apparatus as part of a peer-to-peer network. The motivation would have been because peer-to-peer network disclosed in Holliman offers advantages such as improved data/resource sharing and transparency of physical location of a resource, as Holliman indicates in P. 1, paragraphs 10 and 11.

Therefore it would have been obvious to combine Holliman with Easwar and Cloutier to obtain the inventions as specified in claim 22.

\*\*\*\*\*

25. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Easwar (US 2004/0008897) and Cloutier et al. (US 5,847,771) as applied to claims 1, 6, 8-10, 15, 17, 18, 20, 21, 23-26 and 28 above, and further in view of Berstis (US 6,721,001).

26. Regarding claim 27, the combined invention of Easwar and Cloutier discloses all limitations of its parent, claim 25.

In addition, Berstis discloses having a floppy disk as a storage medium for a digital camera [Fig. 2, ref. 214 and Col. 3, lines 3-8].

The combined invention of Easwar and Cloutier is combinable with Berstis because they both have aspects that are from the same field of endeavor of image acquisition.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combined invention of Easwar and Cloutier with the teaching of Berstis by having a floppy disk as a storage medium. The motivation would have been for portability, as Berstis indicates in Col. 4, lines 58-60.

Therefore it would have been obvious to combine Berstis with Easwar and Cloutier to obtain the inventions as specified in claim 27.

**End of Part A**

**Part B**

**Note: The analyses for Part B below apply to the versions of claims 3-9 as dependent from claim 2; claims 12-19 as dependent from claim 11; and claims 20-26 with respect to claims 2 or 11 as appropriate.**

27. Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Easwar (US 2004/0008897), Cloutier et al. (US 5,847,771) and Lai et al. (US 6,407,680).

28. Regarding claim 11, and similarly claim 2 (since the device of claim 11 performs the method of claim 2), the combined invention of Easwar and Cloutier discloses all limitations of its parent, claim 10.

The combined invention of Easwar and Cloutier does not expressly disclose the following

- means of detecting a request demanding data coded according to the first coding mode
- means of verifying that the data demanded are coded according to the second coding mode
- means of transcoding the data coded according to the second coding mode into data coded according to the first coding mode, if the response at the verification step is positive

However, Lai discloses an apparatus [Fig. 1, ref. 106 and Fig. 2; Col. 7, lines 32-53] that has a means for detecting a request for data in a first coding mode which also serves as



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a means for verifying that the demanded data are coded according to a second coding mode [Fig. 2, ref. 206 (the means); Fig. 5A, ref. 504 (detecting) and Fig. 5B, ref. 520 (verifying); Col. 9, lines 53-61; Col. 14, lines 57-Col. 15, line 8; Col. 14, line 55-Col. 15, line 8; Col. 17, lines 31-42. Note that the source and the destination types are considered the second and the first modes, respectively]. The apparatus also has a means for transcoding from the source type (i.e., the second mode) into the destination type (i.e., the first mode) [Fig. 2, ref. 218 & Fig. 5B, ref. 522; Col. 17, lines 31-42].

The combined invention of Easwar and Cloutier is combinable with Lai because they both have aspects that are from the same field of endeavor of encoding.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combined invention of Easwar and Cloutier with the teaching of Lai by detecting the coding mode of the requested data and if it is different from the existing mode the data is coded, then performs the appropriate transcoding. The motivation would have been to avoid unnecessary transcoding (and thereby improve efficiency) because if the requested data already exists in the desired mode (i.e., type), then it can be delivered without transcoding, as Lai indicates in Col. 17, lines 31-36.

Therefore it would have been obvious to combine Lai with Easwar and Cloutier to obtain the invention as specified in claim 11.

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29. Regarding claims 3-10 and 12-28, the corresponding analyses in Part A can and are applied (and are not repeated here) to modify the combined invention of Easwar, Cloutier and Lai to obtain the inventions as specified by the respective claims.

**End of Part B**

***Conclusion and Contact Information***

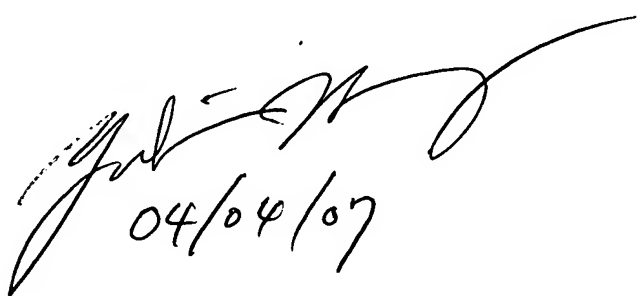
30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Andrew (US 6,351,568) – discloses transcoding from JPEG to a proprietary format [Figs. 4 & 6]
- Christopoulos et al. (US 2001/0047517) – discloses transcoding request that includes transcoding hints [Figs. 2-5]
- Obrador (US 6,992,707) – discloses a camera that transcodes from proprietary format to JPEG [Fig. 2]
- Safai (US 6,715,003) – discloses transcoding from wavelet format to JPEG [Fig. 8; Col. 21, lines 28-33]
- Parker et al. (US 7,106,366) – discloses a camera that transcodes a compressed file into JPEG2000 [Fig. 4, ref. 406; Col. 10, lines 14-17]
- Malomsoky et al. (US 6,512,918) – discloses assigning transcoding task to a processor that is available [Figs. 4 & 5]
- Lee (US 7,071,999) – discloses compression according to access frequency [Col. 3, lines 40-48]

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yubin Hung whose telephone number is (571) 272-7451. The examiner can normally be reached on 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew C. Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



04/04/07

Yubin Hung  
Patent Examiner  
Art Unit 2624  
April 4, 2007